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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,179	09/27/2004	Tsogt Harnood	018793-273	5210
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			EXAMINER RAMDHANIE, BOBBY	
			ART UNIT 1709.	PAPER NUMBER
			MAIL DATE 08/09/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/509,179

Applicant(s)

HARNOOD ET AL.

Examiner

Bobby Ramdhanie, Ph.D.

Art Unit

1709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 09/27/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 5, & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sully et al in view of Awad et al (2001). Regarding Claim 1, Sully et al teaches a method for simultaneous and fractional determination of peracetic acid and hydrogen peroxide, which comprises adding a solution containing peracetic acid and hydrogen peroxide to a pH buffer solution containing a molybdate, iodine, an iodide ion, and measuring redox potential changes in a reaction of peracetic acid with the iodide ion and a reaction of hydrogen peroxide with the iodide ion (Page 653; Summary at top of page & last three paragraphs & Page 656 last paragraph & 1<sup>st</sup> Paragraph under General Procedure). Sully et al does not teach that the pH of the buffer solution to range from a pH value of 5

to 6. Sully et al does however, teach that "the pH value up to at least 4.7." In addition, Awad et al teaches pH buffered solution values used for the simultaneous electroanalysis of peroxyacetic acid and hydrogen peroxide, to be pH values 7.4 and 4.7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sully et al to a pH value between 5 to 6 because Awad et al advises not to analyze peracetic acid and hydrogen peroxide at neutral or alkaline pH values (Page 1840 second column). In addition, Awad et al further suggests only to use acidic media or to acidify the alkaline peracetic acid solutions prior to their analyses (Page 1840 second column). Examiner takes the position on the following items: 1). Table III of Sully et al, displays Cerimetric and Iodimetric methods. These two methods are the measure of redox potential changes. 2). Sully et al suggests a pH of at least 4.7; which may give motivation to one of ordinary skill in the art to try a pH value ranging from 5 to 6.

4. For Claim 5, Sully et al in combination with Awad et al teach a method for simultaneous and fractional determination of peracetic acid and hydrogen peroxide according to Claim 1. Sully et al further teaches Claim 1 wherein a measuring solution containing known concentrations of an iodide ion and iodine is used which is prepared by adding an aqueous solution of known concentration(s) of peracetic acid and/or hydrogen peroxide to a pH buffer solution containing potassium iodide in a measuring container to allow a reaction with potassium iodide (Page 656, 1<sup>st</sup> Paragraph under General Procedure). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sully et al to a pH value between 5 to 6 because

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Awad et al advises not to analyze peracetic acid and hydrogen peroxide at neutral or alkaline pH values (Page 1840 second column). In addition, Awad et al further suggests only to use acidic media or to acidify the alkaline peracetic acid solutions prior to their analysis (Page 1840 second column). Examiner takes the position that the iodine is titrated and therefore the concentration of iodine is known.

5. For Claim 6, Sully et al teaches a method for simultaneous and fractional determination of peracetic acid and hydrogen peroxide according to Claim 1, wherein a pH buffer solution containing a molybdate, iodine, and an iodide ion is used which is obtained by adding a pH buffer solution containing potassium iodide to a measuring container and then adding the molybdate (Page 654; 1<sup>st</sup> Paragraph under General Procedure). Sully et al do not teach the use of potentiostatic electrolysis to generate iodine. Awad et al teaches this feature. Awad et al teaches the use of potentiometric electrolysis in the simultaneous electroanalysis of Peroxyacetic acid and hydrogen peroxide (Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sully et al with Awad et al because according to Awad et al, various methods (Page 1839, Second Column, third line in from top; including the iodimetric method) have already been used for the simultaneous and fractional determination of peracetic acid and hydrogen peroxide, yet their method (Awad et al) of selective electroanalysis was demonstrated for the first time with different reagents over a very broad range of concentrations of peracetic acid and hydrogen peroxide (Abstract). Examiner takes the position that potential electrolysis is

an electroanalytical technique that involves an electrode reaction and employs constant excitation signals.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner takes the position that the claim is unclear as written. The Examiner is not sure if the claim is to the concentrations of the starting solutions for the molybdate, iodine, and iodide ion solutions, or if the final concentrations of the ions in the reaction solution are claimed. Claims 3 & 4 are dependent on Claim 2.

***Allowable Subject Matter***

3. Claims 2-4 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The following is an examiner's statement of reasons for allowance: The prior art of record does not disclose nor teach the lower concentrations for the molybdate, iodine, and iodide ions in Claim 2. Claims 3 & 4 are dependent on Claim 2.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bobby Ramdhanie, Ph.D. whose telephone number is 571-270-3240. The examiner can normally be reached on Mon-Fri 8-5 (Alt: Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BR

  
WALTER D. GRIFFIN  
SUPERVISORY PATENT EXAMINER